It is advisable to split the inner strip and thus avoid pressure on the pointed internal condyle. A piece of half-inch rubber tubing about 9 inches in length is wrapped around with absorbent cotton and made into a pad of comfortable size. This pad, well sprinkled with talc powder, is placed in the axilla, and tied to the upper corners of the splint by means of bandages passing through small holes through the rubber tubing near the ends. When tying gentle traction is made; the pull should not be too great; it varies according to the lesion and to the strength of the muscles. A feeling of comfort and marked relief are the guide as to when the correct amount is reached. This pull is maintained evenly distributed by the elasticity of the rubber tubing. The hand is then supported in a position of ease. It is usually necessary to tighten up the pull from time to time, the comfort of the patient being the index. Under this gentle traction, reduction of the fracture should take place slowly and painlessly. The muscles will act as splints, no other supports being necessary.

If the skin on the lower part of the arm is injured, and adhesive cannot be applied to it, or if the fracture is in the lower two inches of the humerus, extension is procured indirectly by applying the traction just below the elbow (Fig. 2). The forearm is flexed at right angles and the wrist firmly held up. The forearm should be protected by a pad that pressure may be evenly distributed. Any splinting can be used. A layer of absorbent cotton covered by a few layers of plaster-of-Paris bandage moulded to the forearm and bend of the elbow is most satisfactory.

FIG. 2.

This splint has many advantages. It is simple, easily applied, and with the exception of a little tightening of the pull from time to time it need not be altered for some days, and then the only necessary alteration is the changing of the absorbent cotton in the axilla.

Extensive lacerated wounds through the arm can be dressed without moving or taking off the splint. The patient can get up, and even travel without altering the splint or reducing the extension. Above all is the great comfort and relief it gives. This has been observed in all cases in which it was used.

In a very small number of cases there was swelling of the forearm, but this was temporary, and required no special treatment. It occurred in badly infected cases. No ill effects have occurred from pressure in the axilla. The points of support are the axillary folds and vessels, and nerves are in no way pressed upon. The traction is along the line of the bone, and the position of the fragments is necessarily correct.

THE Valentin Haüy Association, which has for many years occupied itself with the training of the blind in farm labour, including the care of animals, the making of butter, the binding of sheaves, the winnowing of grain, etc., is endeavouring to make men who have lost their eyesight in the war fit to return to their former work on the land. A missionary has been found in a man blind from infancy who is sent to teach the maimed soldiers. The results are already very encouraging. One man is reported to have quickly learnt to gather fruit and vegetables, to yoke and unyoke horses, to feed poultry, to milk cows, and to clean harness. Another can without help look after fifty hives of bees. Valentin Haüy, it may be mentioned, was the philanthropist who in 1785 founded in Paris the Institution Nationale des Jeunes Aveugles, said to be the first school for the blind.

A METHOD OF TREATMENT OF "SHELL SHOCK."

BY E. T. C. MILLIGAN, M.D., B.S.MELB.,
CAPTAIN R.A.M.C.

A WELL-KNOWN method of treatment of hysteria has been applied at this casualty clearing station to selected cases of what is now diagnosed as "shell shock." The results of this treatment have been so satisfactory that I desire to give some account of the details of the same in this brief note.

It is not the purpose of the note to classify the many different conditions caused by "shell shock," nor to suggest the pathological condition—psychical or physical—underlying them.

Nature of Cases Treated.

The cases treated were those who "could not speak," "could not hear," "could neither speak nor hear," cases of loss of memory, and cases obsessed by the memory picture of recent terrible experience, their minds being occupied, to the exclusion of all other things, by the bursting of shells in the trench or during the attack.

Other cases which have been treated are those of loss of function, partial or complete, in one or more limbs; of inability to walk, and of neuromimetic deformity of limbs.

We have endeavoured to select for treatment only cases of genuine hysteria and of conscious fraud. Malingerers with mimicry so close, and acting so consistent that it was difficult to discriminate them from genuine hysteria, respond more easily to the method, though in a different manner.

Cases Excluded from this Treatment.

Care has been taken to exclude all cases suffering from discoverable organic lesions of the special sense organs, the central and peripheral nervous system, and organic lesions of the above accentuated by hysteria. The underlying organic lesions in these cases must first be treated.

TREATMENT.

It is well known that during chloroform administration there is a stage before the involuntary struggling stage when a patient is highly susceptible to suggestion. It is while the patient is in this stage that suitable suggestion and stimulation should be used. The treatment must be conducted in a quiet room, apart from other patients. Chloroform is slowly administered, and suggestion carried out by the anaesthetist when the patient has reached the required stage.

In cases of loss of memory, and cases in which the memory of past experience is blotted out, and replaced by the mental picture of recent terrifying incidents, the past life of the soldier can often be recalled by suggesting to him some person or object of his affections, as his wife, his child, or his mother. Mention of his home life and country, his regiment and occupation, has proved effective in restoring the chain of past experience.

Mutism is treated by the insistent asking of suitable questions in the suggestible stage, and cutaneous stimulation is found of use.

Loss of hearing responds to the same methods.

Hysterical attitudes of limbs are changed to opposite attitudes and fixed there firmly with bandages; thus extension is changed to extreme flexion.

Loss of function in limbs is overcome by continuing to give passive movement together with suggestion as the patient is regaining full consciousness.

In obstinate cases complete anaesthesia is produced, and the patient is immediately allowed to recover from the anaesthetic. As he emerges he is again in an impressionable state, and this state has been used for suggestion with success where the first efforts of the operator were not successful.

In all types of cases suggestion should be continued till the patient has fully recovered consciousness. When quite rational the man is assured of his cure, promised a rest, given morphine, and allowed to enjoy a much-needed sleep.

The after-treatment consists in prolonged rest and change of surroundings, even although the most obvious symptom of the mischief—for it is a symptom only—has been remedied.

All cases should be treated at the earliest possible moment. Chloroform is better than other general anaesthetics for this purpose, because it produces definite stages of anaesthesia which can be readily prolonged as required. Cases which have been cured by abnormal experiences, such as an abdominal operation, or a shipwreck, would probably have been cured earlier by suggestion under chloroform.

GUNSHOT WOUND OF SPINAL CORD AND TRACHEA: RECOVERY.

BY

CAPTAIN G. W. THOMPSON, R.A.M.C.,

AND

CAPTAIN G. W. STANLEY, R.A.M.C.

A LIEUTENANT was brought on to the hospital ship *Dongola* at about noon on October 14th, 1915. He was hoisted on deck and conveyed with great care to the officers' ward. He was seen immediately, and found to be in almost a dying condition—blanched skin, pinched expression, and dilated pupils. Respirations were very shallow, and the diaphragm apparently did not move. He was most comfortable in the sitting position, with the chest and shoulders supported; the chin was bent on to the chest. The only history supplied was that he had been wounded in the back two hours before admission. Pituitary extract was given hypodermically, oxygen administered, and hot water bottles freely applied. When the dressings were removed from the neck a gunshot wound was seen in the middle line of the back over the lower cervical vertebrae. The wound was found to go down to the spinal cord, and several loose pieces of bone were removed, and a smooth elongated, partially movable, body detected. This was believed to be a bullet pressing on the spinal cord. "Barker's" solution was injected all round the wound, and what we believed to be the bullet was seized with forceps, and very gently raised; it was found to be attached to the spine. Within two minutes the breathing became deeper and gradually natural, colour slowly returned, and the pulse improved. In half an hour respiration was natural, the pulse fair, and colour good. During manipulation of the partially attached piece of vertebrae air escaped through the wound at each respiration, and as the breathing became stronger each respiration was accompanied by a whistling noise through the wound. The wound and skin were thoroughly cleaned and dressings applied; the trunk and neck were fixed as firmly as possible between pillows in the semi-erect position.

On October 16th we immobilized the neck and back with plaster-of-Paris and adapted aluminium splints, shaped over the head, shoulders, and back. The same day he was transferred to H.M.H.S. *Aquitania* for England. Major Jackson, R.A.M.C., P.M.O. of H.M.H.S. *Dongola*, saw the patient several times with us, and Colonel Mayo Robson, A.M.S., who kindly came on our ship and agreed that the risk in movement, with the neck well fixed, was very small.

There is no doubt that the vertebral column was fractured and a fragment of bone was pressing on the spinal cord, also that the trachea was perforated.

On November 8th we heard from the patient at the 2nd London General Hospital telling us he was convalescent and hoped soon to be about again.

Captain Thompson writes under date May, 1916: Since writing these notes I have met Colonel V. Warren Low, A.M.S., who was attached to H.M.H.S. *Aquitania* as consulting surgeon, and watched the progress of the case on the voyage to England. Colonel Low tells me the patient developed a high temperature with dullness of one lung behind, but these signs cleared up before he reached England.

THE Order of the Nile of the Third Class has been conferred upon Dr. Llewellyn Phillips, Honorary Physician to the Sultan of Egypt.

THE Children's Country Holidays Fund is continuing its work under some difficulties, but managed in 1915 to send away 15,955 children at an expenditure of rather less than as many pounds. Towards the amount the parents contributed over £4,000. The weekly payment for each child had to be raised from 5s. to 6s. The fund, which has its offices at 18, Buckingham Street, Strand, London, W.C., appeals for subscriptions.

EUSOL AND OTHER METHODS OF WOUND TREATMENT.

BY MAJOR C. W. DUGGAN, R.A.M.C.

FROM the appearance of wounds transferred to the Military Hospital, Lincoln, after treatment with eusol, it is evident that a clean, healthy, granulating surface is readily produced by this antiseptic, but having reached this stage one has to admit that the further progress of the wound is delayed by the presence of a watery solution in contact with the wound; and hence recourse is had to various astringents to promote healing.

The reason for this interrupted success is due to neglect of the principle of osmosis without which all treatment is doomed to failure; it has also led to the bewildering number of remedies and methods recently recommended, and to the statement that no single dressing will suit all wounds, or the different stages in the healing of a wound. I have already written on this subject to the effect that the whole question depends on the carrying out of the two principles, namely, antisepsis and osmosis, and keeping these in mind the whole process of wound treatment is a comparatively simple and straightforward one. To fulfil these conditions any dry non-irritating antiseptic may be used; personally I prefer ichthyol; I have used it for more than a year in septic gunshot wounds, and have invariably been satisfied with the results. Glycerine exerts an osmotic action which is superior to all others, and if I were only allowed one drug in the treatment of septic wounds, I would employ glycerine in preference to any other. It is quite unnecessary to vary this treatment at any stage. I have been in the habit of swabbing the wound with pure rectified spirit, but if the patient complains of the irritation I do not insist on continuing its application.

As sepsis and secondary haemorrhage do not occur with this treatment, I am convinced that septic limbs would be saved from amputation. This statement is all the more important in reference to the lopping off of limbs in France, to be followed by a re-amputation in this country—a proceeding which appears to me barbarous in the extreme.

The saline treatment labours under the same disadvantage as eusol—a healthy wound surface is produced which requires the substitution of astringents to induce healing, and even with this change of dressing progress must necessarily be slow. In illustration of these points I quote the two following cases:

A German petty officer had his left arm shattered in a naval action in the North Sea on March 25th, 1916; the arm was removed on his own boat by means of a penknife about 4 in. below the shoulder; he was rescued from the sea by one of our torpedo boats; he remained on board for two days and was then taken to —— where the flaps were trimmed, the wound was dressed every two hours during the day and every three hours during the night with saline solution. After sixteen days he was transferred to a general hospital, and the wound dressed daily with eusol for four days, when he was sent to the Military Hospital, Lincoln. The wound presented a healthy granulating surface, a broad piece of strapping had been placed round the upper arm at the base of each flap, and another piece to bring the flaps together. I removed the strapping at 10 a.m., when I found the flaps gaped, so I painted the surface of the wound and the adjoining skin with 20 per cent. ichthyol in glycerine, and applied gauze, absorbent wool and a bandage. At 7 p.m. I found the flaps no longer gaped, having become adherent in this short period of time; the same dressing was applied. In one week the wound has become reduced to half its original size and in another week it will have completely healed over. The chief point of interest in this case is the rapid osmotic action of the glycerine.

Pte ——, on October 13th, 1915, was hit in the left hand by a bullet from a Maxim while he was in a German trench; first aid was applied and he then walked to the field ambulance where a dry dressing was put on. He was sent to Rouen for three weeks; he was next transferred to a general hospital in England, where he remained under treatment for nineteen days, and then he came under my care in the Military Hospital. He stated that the two end digits of his left ring finger had been removed at the general hospital. To relieve suppuration two incisions had been made in the palmar surface of the hand —namely, one near the little finger, another in the centre of palm, and there was a third incised wound 1 in. above front of wrist; a drainage tube had been passed from this wound to the wound in the centre of the palm. I removed the drainage tube at the first dressing, and did not replace it; no useful purpose was served by it, as the anterior annular ligament of wrist compressed the tube.

As a substitute for drainage tubes, I always syringe out with pure spt. vini rectificat., and in this case the spirit passed